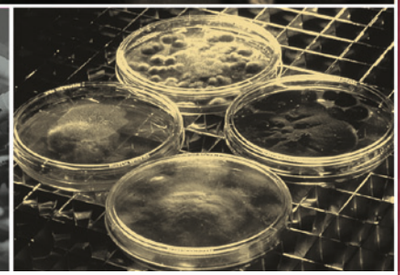
Contact

The JPM TMT Program Office is matrixed from the Joint Program Executive Office-Chemical and Biological Defense with oversight from the Office of the Secretary of Defense.

- **Joint Project Manager**
  Transformational Medical Technologies (JPM TMT) Program Office
  Phone: (703) 767-2347
  Website: www.jpmtmt.mil
  E-mail: jpmtmtwebsite@dtra.mil
- **Office of the Deputy Assistant to the Secretary of Defense for Chemical and Biological Defense Programs (OATSD(CBDP))**
  Phone: (703) 693-9410

www.jpmtmt.mil.



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Joint Project Manager Transformational Medical Technologies (JPM TMT)

Protecting the ***Warfighter*** *and the* ***Nation*** *from* ***biothreats***

About JPM TMT

In 2006, the Department of Defense (DOD) pioneered the Joint Project Manager Transformational Medical Technologies (JPM TMT) to transform and strengthen DOD's ability to protect the Warfighter from the threat of emerging and genetically engineered biological pathogens. Pursuant to Homeland Security Presidential Directives 10, 18, 21 and National Security Presidential Directive 33, JPM TMT integrates the best efforts within government, academia, DOD, biotech, and pharmaceutical industries—from pathogen identification through the development of broad-spectrum medical countermeasures—to provide a novel response capability for the Warfighter. The JPM TMT Program Office is matrixed from the Joint Science and Technology Office–Defense Threat Reduction Agency and Joint Program Executive Office–Chemical and Biological Defense with oversight from the Office of the Secretary of Defense.

A Bold Journey

Before the modern era, infectious diseases were the most common cause of death among Warfighters. Many suffered and died from minor injuries because there was no defense against deadly bacteria. With the mass production of penicillin during World War II, medicine entered a golden age. Patients were cured in a matter of days, and one illness after another was successfully treated. This "wonder drug" spurred the development of more antibiotics and saved innumerable lives worldwide. More than 60 years later, JPM TMT is poised to spark another medical revolution.

The Threat is Real

While medical and other technological advances have conquered diseases and extended life, they also paved the way for advanced weaponization of biological agents capable of mass casualties. Today, the time required to develop and produce such agents is much shorter than the time necessary to develop, license, and produce a response. Additionally, many disease-causing pathogens have become drug resistant, and previously conquered diseases are reemerging to threaten the lives of our Warfighters. JPM TMT recognizes these threats and the urgent need to enhance our nation's current response capability, which includes the following inadequacies:

- Capacity to rapidly deploy countermeasures at the onset of a threat is insufficient.
- Prophylaxis (e.g., vaccines) must be administered weeks to months prior to deployment or attack.
- Post-exposure therapeutics are limited and do not address emerging diseases and engineered threats.
- The process to ensure a medical product is safe, effective, and suitable for regulatory approval, production, and distribution is lengthy and expensive.
- It can take a billion dollars or more and a decade of development to bring a new product to market.

JPM TMT MISSION

Protect the Warfighter from emerging and genetically engineered biological threats by providing a novel response capability from identification of pathogens to the development of medical countermeasures.

JPM TMT's Defensive and Innovative Lifesaving Solutions for the Warfighter

JPM TMT takes a strategic approach to developing capabilities that enable response to biological threats. Three key performance enablers provide proof-of-process:

- Developing rapidly adaptable platform technologies for generating medical countermeasures.
- Validating platform technology and pathogen identification processes and methods by developing broad-spectrum countermeasures for viral hemorrhagic fevers and intracellular bacterial infections.
- Determining genetic sequences for pertinent pathogens against which to screen, identify, and characterize potential biodefense threats and identify new drug targets.

JPM TMT is Already Delivering Results

Since 2006, JPM TMT has built a balanced portfolio of projects aimed at enhancing our nation's response capability to bioterrorism attacks while sustaining protection of the Warfighter. JPM TMT's accomplishments to date are substantial:

- Competitively built a diverse portfolio of more than 50 projects and 100 subcontractors drawn from innovative biotechnology firms, pharmaceutical corporations, academic institutions, and government laboratories.
- Initiated a robust portfolio that rivals those of the pharmaceutical industry, containing novel platform technologies and 20 potential investigational new drugs (INDs).
- Successfully obtained Federal Drug Administration (FDA) approval of IND applications for therapeutics against Ebola and Marburg hemorrhagic fever viruses. (No therapies are currently available to treat these diseases and potential bioweapons, which have mortality rates of up to 90%.)

  These INDs are proof-of-process for a versatile drug platform capable of generating new therapeutics within days.
- Acquired access to a comprehensive database for evaluation of genetic sequences against potential drug targets from over 90% of the pathogenic virus families infecting humans.
- Initiated an integrated pathogen evaluation capability for sample handling, rapid identification, and characterization of pathogenic and genetically modified bacteria and viruses and discovery of new drug targets.
- Implemented a platform for evaluation of promising therapeutic candidates and repurposing of FDA-approved drugs. This new wealth of data will improve biomarkers (speed testing) and yield better understanding of disease biology (informing which drug to use and when to use it).